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Voluntary _ Public

Date: 3/20/2013

GAIN Report Number: NZ1302

New Zealand

Post: Wellington

Forestry and Wood Products Report 2013

Report Categories:

Wood Products

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Report Highlights:

Total planted exotic forest in 2012 remained at 1.719m hectares, similar to 2011 levels. Increases in planted area that were originally estimated for 2012 are not likely to materialize, according to industry sources, as uncertainty and lack of confidence plagues the sector. Harvested volume of logs increased by 1.6% to a total of 26.5 million cubic meters (M3). Over the last 7 years all of the increases in the log harvest have been exported in log form, mostly to China. Prospects still look good for trade in this sector. Total wood product exports were down 5.5% to \$US 3.37 billion. Most of the reduction was due to raw log in-market price reductions.

Executive Summary

According to the Ministry for Primary Industry (MPI) annual survey the net planted area of exotic forestry for April 2012 was on a par with the previous year at 1.719 million hectares. In the year to March 31, 2012 44,100 ha was harvested, representing an increase of 800 hectares over the same period last year. The total fallow land available for replanting rose 6,200 ha to 60,500 ha. Total area planted to forest has declined since 2005, when total area peaked at 1.83 million hectares. Although planted area increased slightly in 2011, industry sources indicate that the overall decline in area planted to forest is expected to continue for 2012 and beyond. MPI estimates indicate that 12,000 ha of new area planted went ahead during 2011 – this was almost double the newly planted area in 2010. However, industry participants indicate that new planting in 2012 may have declined to somewhere in the 1000 to 4000ha range. What is clear is that confidence has waned dramatically over the last 12 to 18 months due to uncertainty created by the government's management of the Emissions Trading Scheme and carbon pricing. Log prices have also come down from their highs, and when this is coupled with an appreciating currency, incomes in the forestry and wood manufacturing sector have been significantly impacted.

The annual log harvest maintained a brisk pace with 26.5 million cubic meters (M^3) of wood extracted in the year to September 2012. This was just 0.414 million M^3 greater than the previous year. The rate of expansion of the annual log harvest is on trend to reach around 35 million M^3 in a decade.

From a low of just over 5 million M³ in 2005, the volume of raw log exports has more than doubled in the last 7 years. At 12.9 million cubic meters in 2012, log exports accounted for 49% of the total harvest in New Zealand. This increase has soaked up all the increase in harvested volumes since 2006. Additionally 5.5 million M³ of wood ended up as sawn timber, particle board, fiber board or veneer products such as plywood or laminated veneer lumber during the year as of Sep, 2012. The pulp, paper and export chip sectors accounted for just over 4 million M³ of the harvest. The residual balance totaling about 4 million M³ went to co-generation of energy such as heat, steam, or electricity, or to smaller niche end uses (sawdust for animal bedding etc); or to waste.

Total export receipts for wood products, pulp, and paper exports were down by \$US195million (5.5%), to \$US3.371 billion for the year as of Sep 30, 2012. A reduction in the average raw log price from \$US104/M³ for 2011 year to \$US91/M³ in 2012 accounted for \$US 159 million of the drop.

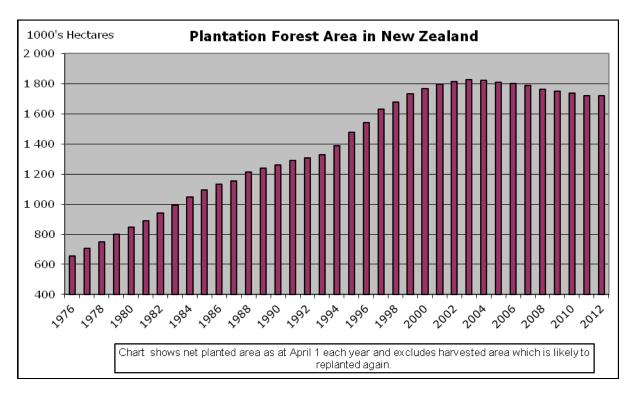
China is still the most valuable export destination for New Zealand wood products, accounting for 32% of all export receipts for all destinations. China takes 64% of all log exports and a growing volume of lumber and value added wood products. Wood product exports are starting to climb back out of the perilous state they were in just after the Global Financial Crisis hit. New Zealand wood product exports climbed to 3.4million M³ for the year ending September, 2012. This represents a 3% increase over the same period the previous year. However, the appreciating New Zealand dollar has acted like an invisible handbrake on the recovery, dampening financial margins for wood processors to the point that survival is the order of the day and the level of reinvestment is minimal.

On the domestic front, new residential building permit were up 18.5% for the year ending September 30, 2012. However, total permits are still only about 50% of the number issued in 2004. Commercial building permits, at 5,869, were up 9% over last year but well below the 8,000 level that was common to see during the middle of the last decade. The Christchurch earthquake rebuild is also underway. At this stage housing repairs rather than new builds are being completed and there isn't too much activity in the commercial arena. Lumber and other wood product manufacturers are pinning their hopes on the eventual upturn in housing starts they feel must occur in Auckland, New Zealand's largest city. In addition the use of wood in commercial building and intensive

multi-story housing is gathering momentum. This bodes well for the future but isn't helping many manufacturers now.

Note: the time interval used in this report for the narrative, most charts and tables unless otherwise specified is a 12 month period ending on 30^{th} September.

Forest Area 2012



Source: MPI

According to the Ministry for Primary Industry (MPI) as of April 1, 2012, net planted area of non-indigenous (exotic) plantation forestry totaled 1.719 million hectares (ha) which is virtually the same as in the previous year. The conifer, Radiata Pine, better known in the US as the softwood Monterey Pine is planted in over 89% of the exotic plantation area.

Non-indigenous forestry harvested area was 44,100 ha, which represents an increase of 800 ha over last year's level. Total fallow land available for replanting rose 6,200 ha, to 60,500 ha. There is a risk that a proportion of this area will remain unplanted. It appears that industry participants who make the planting/land-use decisions are becoming more cautious. The main reasons behind this new-found cautiousness are:

- A high degree of uncertainty. There is no clear view as to whether market conditions or Government policy settings will continue and if so whether they will continue to impact negatively on the sector.
- Government policy making in regard to the Emissions Trading Scheme (ETS) has allowed a huge supply of cheap carbon units to be imported in to New Zealand. This has severely depressed the carbon market (from NZ 20-25 per ton of $CO_2 18$ months ago to NZ 2-3 per ton of $CO_2 18$ months ago to NZ 2-3 per ton of NZ 2-
- Log prices have come off their recent highs and have trended downwards for most of 2012. This has
 made domestic saw millers happy but hasn't given foresters the confidence to invest in additional land
 to plant.
- Even though the Reserve Bank of NZ is running a relaxed monetary policy, interest rates are still higher than most other OECD countries; this and the perception NZ stands to prosper from Asian economic

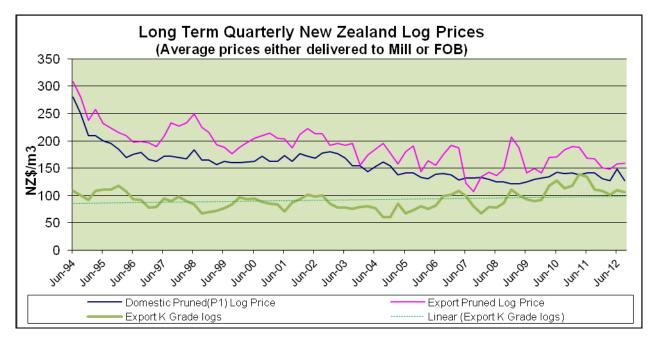
development; together with the continued weak U.S. dollar has caused the NZ dollar to appreciate way beyond what many consider should be its true level. This has increased the negative impact of reduced in-market prices for logs and nullified price gains for lumber in markets like the US.

The irony of the current situation is that successive Governments over the last decade have targeted policy at increasing the rate of forestry planting but the current combination of market forces and policy settings may well bring about the exact opposite: deforestation. Since the beginning of 2008 there has been a deforestation penalty based on the CO2 sequestered in the trees and the prevailing carbon price. Previously this penalty was NZ\$ 20,000 to 25,000/ha. Now it ranges between NZ\$ 2000 to 3000/ha.

The relatively cheap penalty to deforest is providing an incentive to change land use to intensive pastoral animal agriculture, most likely dairying. Up to 100,000 ha could be suitable for the change. There may not be a rush to deforest as some landowners may purchase cheap carbon units now so as to give themselves options at some point in the future to effect land use change without the risk of the deforestation penalty cost influencing their decision making.

While new plantings are likely to have dropped to very low levels (1000 to 4000 ha) parcels or blocks of the existing exotic forest resource continue to change hands readily.

There is some discussion between industry stake holders and the Government as to how to stimulate planting in spite of the ETS policy settings.



Source: MPI

National Exotic Forest Estate Statistics										
Area and standing volume at: (note 1) 1-Apr-08 1-Apr-09 1-Apr-10 1-Apr-11 1-Apr-12										
Forest area										
	1 761									
Net stocked area (ha)	000	1 751 000	1 738 000	1719400	1719501					
Harvested area awaiting replanting (ha) (note2)	47 500	46 400	55 300	54300	60500					

Total forest area	1 808 500	1 797 400	1 793 300	1773700	1780000
Growth characteristics					
Standing volume (000 m ³)	445 933	456 874	467 063	479709	488437
Average standing volume (m³/ha)	253	261	269	279	284
Area-weighted average age (years)	15.2	15.6	15.9	16.3	16.4
Area by species (note3)					
Radiata pine (ha)	1 575 000	1 568 000	1 556 000	1545000	1543000
Douglas-fir (ha)	111 000	109 000	110 000	107000	108000
Cypress species (ha)	9 000	9 000	10 000	10000	10000
Other softwoods (ha)	26 000	26 000	25 000	24000	24000
Eucalyptus species (ha)	25 000	25 000	24 000	22000	23000
Other hardwoods (ha)	15 000	13 000	13 000	13000	13000
Radiata pine area by tending regime					
Pruned with production thinning (ha)	213 000	216 000	217 000	210000	207000
Pruned without production thinning (ha)	706 000	728 000	708 000	700000	692000
Unpruned with production thinning (ha)	34 000	31 000	37 000	35000	41000
Unpruned without production thinning (ha)	622 000	593 000	593 000	599000	603000
Planting statistics Year ended (note 4)	31-Dec- 07	31-Dec-08	31-Dec-09	31-Dec- 10	31-Dec- 11
Total estimated new planting (ha) (note5)	2 400	1 900	4 300	6000	12000
Replanting (ha) (note6)	34 700	31 300	32 500	35226	39253
Harvesting statistics Year ended (note7)	31-Mar- 08	31-Mar-09	31-Mar-10	31-Mar- 11	31-Mar- 12
Area clearfelled-all species (ha)	41 400	41 800	43 500	43300	44100
Area clearfelled-radiata pine (ha)	38 500	37 700	39 200	39800	40600
Volume clearfelled-all species (000 m ³) (note6)	18 663	19192	20588	21725	23312
Volume production thinned-all species (000 m³) (note6)	195	190	146	201	90
Total volume removed -all species (000 m³) (note6)(note8)	18 858	19 382	20 734	21926	23402
Average clearfell yield -all species (m³/ha) (note6)	451	459	473	506	529
Volume clearfelled -radiata pine (000 m ³) (note6)	17 753	18 095	19 192	20493	21973
Average clearfell yield - radiata pine (m³/ha) (note6)	461	480	489	515	541
Area-weighted average clearfell age for radiata pine (years)	27.9	28.3	28.4	28.6	28.6

Notes:

- 1. Source: National Exotic Forest Description as at 1 April, for the year noted, compiled by the Ministry of Agriculture and Forestry.
- 2. In this report, the area of harvested land that was recorded as awaiting a land use decision has been reported in the area awaiting replanting.

^{3.} Individual entries may not add to totals due to rounding.

^{4.} The forestry statistics released in this report, and in particular, new planting estimates, may differ from those produced in the Agricultural Production Survey by Statistics New Zealand. These surveys use different survey frames and designs.

^{5.} The method used to estimate new planting is described on page 7 of this report.

- 6. The 2011 survey only sought data from owners with 1000 hectares of forest or more. These estimates have been rated up based on the 2010 NEFD survey results for owners with less than 1000 hectares of forest.
- 7. All volumes are reported as recovered volumes inside bark.
- 8. These estimates are based on data collected in the 2011 and 2012 NEFD surveys and may differ from the roundwood removals estimate as published in the Annual log and roundwood removal statistics, Ministry for Primary Industries. This is due to the estimate from that source being an indirect estimate that uses conversion factors for each forestry product to estimate the total roundwood input that would be required to produce total forest product outputs.

Log Harvesting 2012

For the year ending September 2012, 26.5 million M³ of wood was harvested. This is just 0.414million M³ greater than the previous twelve months.

Harvest levels are driven by demand and availability of suitable logs. Demand by domestic processors is still languishing at levels seen in 2001-2002. However, overall log demand is being underpinned by the continued demand for raw log imports into China. Even though for the first six months of the year ending Sep 30, 2012 volume was down on the previous year by the 2nd half of the year ending Sep 30, 2012 volumes had surged ahead enough for the total to surpass the previous year.

On the availability front the average age of the national exotic plantation resource is still increasing and the average age of the trees harvested in the year to March 31, 2012 was the same as the previous year. This would suggest there is no shortage of supply. New Zealand's wood harvest is expected to increase to around 35m M³ over the next decade, so supply is not really an issue. For greater detail on the species planted and stand ages check the table headed"National Exotic Forest Estate Statistics" above.

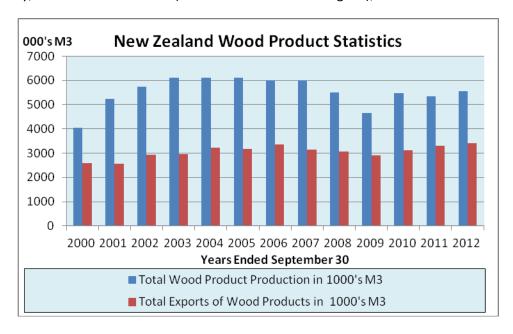
Estimated Annual Roundwood Removals from New Zealand Forests										
(units: 000 cubic meters of roundwood)										
Natural Forest Removals from planted production forests										
Year Ended	Total Removal s	Saw Logs	Peele r Logs	Small Logs	Pulp Logs	Expor t Chips	Export Logs	Total Plantatio n Removal	Total Removal s	
Sep-	5	LUGS 7	Logs	Logs 1	LUUS 3	Cilips	Logs	S	3	
01	52	185	674	530	452	418	6 794	20 053	20 105	
Sep-		7		1	3					
02	49	841	822	441	501	401	7 613	21 619	21 667	
Sep-		8	1	1	2					
03	36	139	035	403	993	299	8 239	22 108	22 142	
Sep-		7	1	1	3					
04	29	955	109	457	266	230	5 859	19 877	19 904	
Sep-		7	1	1	3	244		10.010	10.010	
05	23	827	176	432	308	244	5 033	19 019	19 042	
Sep- 06	22	7 529	1 140	1 494	228	219	5 323	18 933	18 954	
Sep-	22	7	1	1	3	219	3 323	10 933	10 934	
Зер- 07	19	877	231	306	410	325	6 286	20 434	20 454	
Sep-	1	7	1	1	3	1 323	1 200	20 101		
08	17	298	189	236	299	411	6 290	19 722	19 739	
Sep-		6		1	3					
<u>0</u> 9	12	214	785	162	263	204	8 359	19 986	19 998	
Sep-		7	1	1	3		10			
10	17	312	037	122	599	315	043	23 427	23 444	
Sep-	14	6828	1184	1142	3722	402	12815	26 092	26 107	

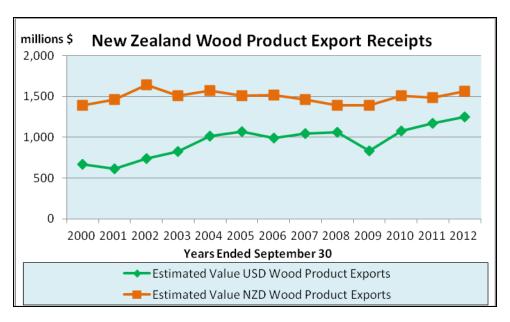
11									
Sep- 12	15	7132	1202	1262	3649	363	12899	26 507	26 521

Source: MPI

Wood Disposal 2012 – Where Did All the Logs Go?

- 12.9 million Cubic meters of the harvest were directly exported in log form in the year ending Sep 30, 2012, which amounted to 49% of the total harvest.
- A further 5.5 million M³ of wood ended up as sawn timber, particle board, fiber board or veneer products such as plywood or laminated veneer lumber for the year ending Sep, 2012.
- The pulp, paper and export chip sectors used another 4.01 million M³.
- The residual balance (4.07 million M³) went to co-generation of energy either: heat, steam, or electricity; smaller niche end uses (sawdust for animal bedding etc); or to waste.





Source: GTA, MPI, StatisticsNZ

Exports Vs Domestic Usage

Exports

Total export receipts for wood products, pulp, and paper were down by USD195m to USD3.371bn (-5.5%) for the year ending Sep 30, 2012. A reduction in the average raw log price from USD104/M³ for the Sep, 2011 year down to USD91/M³ in the 2012 accounted for USD159m of the drop.

In contrast to many of the other major primary produce exports from NZ (dairy, meat), wood products and forestry relies on only six markets for 70-80% of total revenue. They are: the domestic market, China, Australia, Japan, South Korea, and India. What is different for the forestry/wood sector is that domestic consumption takes approximately 27% of the total log harvest (with dairy this is only about 5%).

While only three of the top 10 export destinations showed positive gains in terms of value in 2012 over a seven year period overall export returns have grown at an average annual compound rate of 9%. The phenomenal stretch of increases in exports to China is behind this. Exports to China grew at an average annual compound rate of 27%. Only exports to India can better this rate of growth at 28% p.a., but off a very low base. Approximately 65% of this growth is due to increased volumes. The balance comes from better prices which the long term log price series charted above can attest to.

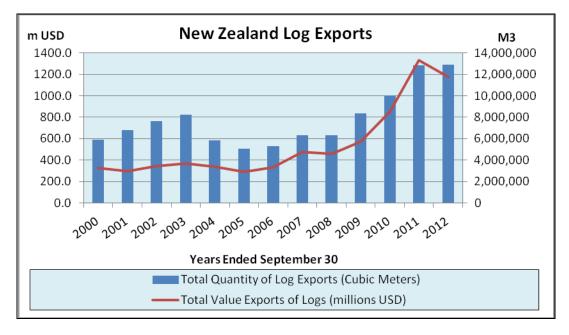
New Zealand Export Statistics										
Commodity: Wood Products & Pulp, Paper, All Wood, Pulp & Paper HS Codes:44,47,48										
Year Ending Series: September, 2006 - 2012										
Partner	Partner United States Dollars - FOB Receipts									
Country										
	251,203,05	365,222,11	353,227,50	500,822,70	743,975,03	1,181,171,3	1,074,487,3			
China	0 6 3 3 0 08 50									
	436,900,17	526,395,66	614,945,92	426,192,15	564,705,51	639,354,51	609,787,72			
Australia	2	8	3	4	3	8	6			

	324,030,89	370,967,61	357,735,15	289,934,49	354,637,78	421,399,37	445,278,85
Japan	4	5	7	2	9	8	3
Korea	248,752,68	314,828,67	289,597,40	235,238,29	297,869,39	368,054,92	318,460,27
South	5	2	1	0	5	8	9
					105,095,18	173,681,91	159,938,20
India	36,422,432	52,456,746	61,184,119	60,971,109	9	0	2
United	270,682,63	235,963,87	208,528,62	138,168,77	167,385,44	148,856,38	145,444,91
States	6	3	3	2	5	1	9
Indonesi					118,490,58	113,424,68	103,269,32
а	80,906,087	72,062,126	94,192,701	86,968,899	3	4	6
Philippin							
es	58,829,434	57,472,479	57,774,740	47,422,880	55,312,550	74,898,064	82,488,460
Taiwan	51,241,582	56,960,648	57,012,765	40,464,958	61,648,064	76,121,446	65,823,431
Malaysia	26,007,134	35,162,091	35,617,969	29,607,952	51,198,884	63,502,255	65,178,654
Rest of	220,855,44	295,650,03	337,176,06	265,037,32	309,058,38	304,958,48	300,240,55
World	1	9	0	7	2	9	5
	2,005,831,5	2,383,142,0	2,466,992,9	2,120,829,5	2,829,376,8	3,565,423,3	3,370,397,7
World	50	72	58	34	28	61	57

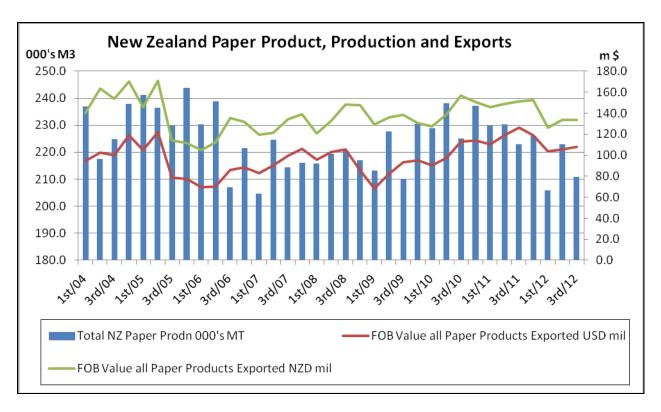
Source: GTA

The huge increase in demand for raw unprocessed logs created by China over the last decade has been instrumental in this positive situation developing. While there was some doom and gloom being spread at the end of 2011 and beginning of 2012 with reduced shipments and prices, the economic activity which consumes NZ softwood has now picked up. And the high inventory levels built up in 2011 have been worked through.

China took 64% of all log volumes exported by New Zealand in the year ending Sep, 2012 with Korea, India, and Japan taking 17.5%, 11.6%, and 5.6% respectively. These four markets accounted for 99% of the total volume of raw logs shipped in the year ending Sep, 2012.

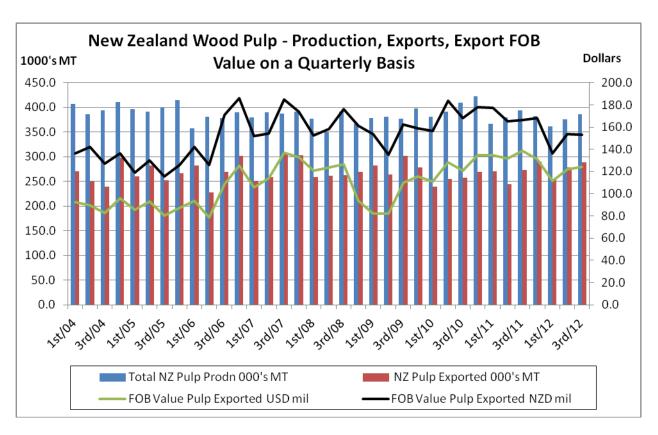


Source: GTA



Source: GTA, MPI, StatisticsNZ

On the value-added side the traditional export markets for New Zealand are Australia, Japan, Korea, and the US. Until recently, with the exception of Australia the construction, home renovation and furnishing sectors in these markets have been in the doldrums. When combined with a similar decline in domestic construction activity, this has severely impacted on wood processors in NZ.



Source: GTA, MPI, StatisticsNZ

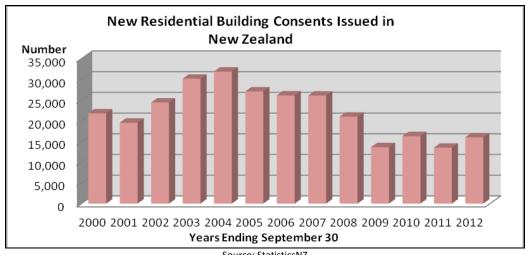
However over the last 12 months there haven't been any major closures of sawmilling or wood product facilities. Norske Skog has shut down a paper production line which will halve its Kawerau site's 150,000 metric ton capacity but that is the sole major processor to announce a significant cutback in the last 12 months. It is felt that there is a glimmer of hope of market conditions improving especially in the US. However the continued appreciation of the NZD especially against the USD has eroded most of the gains in prices achieved in the market place. Exporters who have been predominantly involved with the Australian market have not been impacted anywhere as severely. The AUD has appreciated even more strongly than the NZD and the construction sector fared better after the Global Financial Crisis than most other OECD countries.

The Domestic Scene

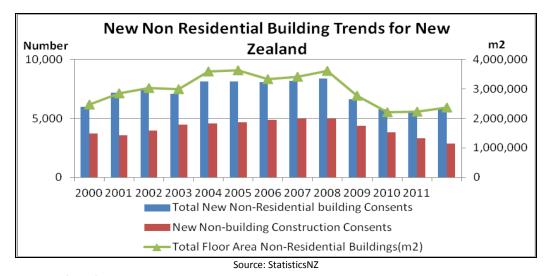
New residential building permits were up 18.5% for the year ending September 30, 2012 but at a total number of 16,000, permits issued are still at only about 50% of the number issued in 2004. Given current population growth and demographic trends it is estimated that 25,000 to 30,000 new dwellings will be needed each year. Housing affordability has become a major political issue, with the main opposition party (Labour) saying if it becomes the ruling party at the next election in 2014 it would build 10,000 houses a year for sale to the general public as they are completed.

In the wake of the February 2011 earthquake in Christchurch, the rebuilding of the city and surrounding areas finally got underway and is progressing strongly. Dwelling alteration permits are running at 19,000 per annum which are only 16% below the peak number of alteration permits issued in both 2006 and 2007. This development is good for wood products manufacturers. Total production of manufactured wood products at 5.5 million M³ for the year ended September 2012 is up 200,000 M³, but is still 600,000 M³ (approx 10%) behind peak production achieved in 2004.

In the longer term there are two hopes on the horizon: firstly the rate of building construction will need to increase in Auckland (the largest city) to contain population increase and depreciation of the housing stock and it is thought it is just a matter of time before it does. Secondly the engineering science behind using wood in commercial building and intensive multi-storey housing is really gathering momentum (for e.g. Cross-Laminated Timber prefab panels, Structural Timber Innovation Company (STIC) building techniques). With some changes to building standards and codes these buildings could become relatively cheaper to produce. This combined with the very low carbon footprint and the green credentials could see the huge potential for wood construction really take off. Companies which can establish world class manufacturing efficiencies in this area will have very good prospects for export sales of pre-fabricated wood and wood hybrid buildings to many places around the globe.



Source: StatisticsNZ



Other Issues and Policy

New Saw Mill

Reportedly the Taupo District Council has issued permits for a world-class sawmill to be built in the district. It is thought that the annual output would be in the order of 1m M³ and its energy requirements to come from geothermal steam plentiful in the district. It is thought that Chinese investors are behind the development which would be constructed in the middle of the major forests of the central plateau of the North Island and within a

couple of hour's drive of Tauranga port. However while this is heartening for the sector there has been no official announcement that the project will actually go ahead.

Australian Illegal Logging Laws

Forestry and wood processing participants are worried about the implications of the recently passed Australian law on illegal logging. While the law has been enacted the regulations to bring it into force have not been promulgated yet. While NZ understands the law is to stop importation of timber from wholesale nonsustainable logging of indigenous forests, it is so broadly-worded that many fear almost any logging practice could be construed as illegal. The industry is working with Ministry for Primary Industry to reach an overarching agreement with the Department of Agriculture Forestry & Fishing on NZ's eligibility.

Montreal Process

New Zealand is a participant in the Montreal Process. The Montreal Process is a voluntary group of countries that collaborate at governmental level to further sustainable management of their forests and to create a pathway for collaboration and capacity building. The US is also a member.

Useful Websites:

MPI: http://www.mpi.govt.nz/

NZ Forest Owners Assn: http://www.nzfoa.org.nz/

Wood Processors Association of New Zealand: http://www.wpa.org.nz/
Structural Timber Innovation Company (STIC): http://www.stic.co.nz/home

Cross Laminated Timber: http://nzwood.co.nz/industry-news/2011/07/05/cross-laminated-timber-comes-to-nz/